CIVIC ARENA
(Public Auditorium)
66 Mario Lemieux Place
Pittsburgh
Allegheny County
Pennsylvania

HABS No. PA-6780

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HISTORIC AMERICAN BUILDINGS SURVEY

CIVIC ARENA (Public Auditorium)

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Location: The Civic Arena is located at 66 Mario Lemieux Place (formerly Auditorium Place) in the extreme western or lower part of Pittsburgh's Hill District neighborhood, which is commonly known as the Lower Hill. Immediately west of the Civic Arena is Interstate 579, a depressed highway that separates the Lower Hill from the central business district. The area fronts on Washington Place, and its site is bounded by Washington Place on the west, Bedford Avenue on the north, Centre Avenue on the south, and Mario Lemieux Place on the north. Three arena surface parking lots adjoin the site: the East Lot and Melody Tent Lot are located east of the arena in the area between Mario Lemieux Place and Crawford Avenue; the West Lot is located in the triangular area between Washington Place and I-579.

The Civic Arena is located at latitude 40.441714, longitude -79.989882. The coordinate represents the center of the building, which is also the terminus of the steel cantilever truss supporting the roof. The coordinate was obtained on April 11, 2011, using Google Earth computer software. The coordinate's datum is North American Datum 1983. The Civic Arena's location has no restriction on its release to the public.

Present Owner/Occupant: Sports and Exhibition Authority of Pittsburgh and Allegheny County. The building is not presently occupied.

Present Use: The building is vacant; adjacent surface parking lots are used in support of the adjacent Consol Energy Center, which replaced the Civic Arena in August 2010, and daily commuters.

Significance: The Civic Arena is significant as an outstanding example of modern architecture both in the Pittsburgh region and nationally. The building displays an innovative use of materials and is technologically significant as the world's first retractable stainless steel dome. At the time of construction, the building was viewed as the

physical expression of the technological advances made possible by Pittsburgh's prowess in science and industry. The Civic Arena is also significant in the context of urban renewal as the centerpiece of the redevelopment of Pittsburgh's Lower Hill. The 95-acre renewal project was one of the largest in the nation and was planned to contain a cultural center, housing, and commercial development, most of which were not completed. The Civic Arena was one of the most prominent projects of Pittsburgh's "Renaissance," which was a civic renewal scheme of unprecedented scale, implemented by a partnership between the region's corporate and civic leaders, intended to make Pittsburgh competitive with other large cities in retaining large corporations. The chief aim of Pittsburgh's Renaissance was to transform the polluted, crowded, and outmoded industrial city into a clean, modern, and efficient metropolis. The gleaming arena dome, positioned prominently above downtown was both a symbol of Pittsburgh's rebirth and the prime site from which one could observe the transformation of the central business district itself—by gazing from the arena, whose roof opened to reveal smoke-free skies, a modern highway network, and sleek modern office towers clad in stainless steel and aluminum. Lastly, the Civic Arena is significant for its association with Pittsburgh architectural firm, Mitchell & Ritchey, the premiere architect of Pittsburgh's Renaissance, and the New York engineering firm Ammann and Whitney.

Historians: Jesse A. Belfast, M.A., Architectural Historian, Michael Baker, Jr., Inc. and Laurence A. Glasco, Ph.D., Associate Professor of History, University of Pittsburgh. April 2011.

Project Information: This project was undertaken for the Sports and Exhibition Authority of Pittsburgh and Allegheny County by Michael Baker, Jr., Inc. between December 2010 and April 2011. Jesse A. Belfast was the project supervisor and architectural historian, and Laurence A. Glasco was project historian. Andrew Baugnet, of Andrew Baugnet Photographic Documentation, was the project photographer. This documentation was prepared pursuant to

the Pennsylvania History Code (37 Pa. Cons. Stat. Section 510) in accordance with a Memorandum of Agreement between the Sports and Exhibition Authority of Pittsburgh and Allegheny County and the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation as mitigation for demolition of the Civic Arena.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection:

-May 31, 1956, Demolition of 1,000 buildings (752 parcels) begins for Lower Hill redevelopment;[1]
-November 1, 1957, date of architect's drawings[2];
-April 25, 1958. ground breaking[3]
-September 17, 1961, dedication[4]
-September 19, 1961, first performance (Ice Capades)[5]

2. Architect:

James A. Mitchell, with Dahlen K. Ritchey (Mitchell & Ritchey Architects, Pittsburgh).
Ammann and Whitney, New York, Consulting Engineers

James Anastasiou Mitchell (1907-1999) received a B.A. in Architecture from Carnegie Institute of Technology, Pittsburgh, Pennsylvania, in 1932 and a M.S. from Columbia University in 1933. Mitchell was awarded a gold medal from the Beaux Arts Institute of Design in 1933 and was a finalist for the 1933 Paris Prize in Architecture. In 1934, Mitchell was awarded the John Stewardson Traveling Scholarship. Dahlen K. Ritchey (1910-2002) received a B.A. in Architecture from Carnegie Institute of Technology in 1932 and a Masters of Architecture from Harvard University in 1934. Ritchey was a finalist for the 1933 Paris Prize in Architecture and was awarded the Nelson Robinson Traveling Fellowship in 1934.[6]

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[1] Pittsburgh Tribune-Review, *Inside the Igloo: Pittsburgh's Favorite Gathering Place* (Pittsburgh: Trib Total Media, 2010), 13.
[2] In collection of DRS Architects, Pittsburgh.
[3] Chamber of Commerce of Greater Pittsburgh, Public Auditorium dedication souvenir (1961).
[4] "Ceremony To Open Auditorium," *Pittsburgh Press,* 17 September 1961, sec. 7.
[5] Pittsburgh Tribune-Review, *Inside the Igloo,* 21.
[6] "Brochure On Background and Qualifications," Mitchell & Ritchey, ca. 1955 (in collection of Edward Mitchell).

As scholarship recipients, Mitchell and Ritchey spent over a year in Europe studying ancient and modern works of note. The pair spent considerable time with prominent modern architects, which would influence their later works in Pittsburgh. Mitchell and Ritchey established an architectural practice in 1938, but the practice was suspended from 1943 to 1946, when the partners served as officers in the U.S. Navy. Ritchey served as a radar officer on the U.S.S. Saratoga, while Mitchell initially served as Technical Assistant for Industrial Structures in Ordnance Stations, Bureau of Ordnance. Mitchell's exceptional talent as a planner earned him a promotion to Chief of the Facilities and Services Section in the Naval Ordnance Establishments Division of the bureau, a position which no person had held without attaining the rank of Admiral.[7]

Ritchey had befriended Edgar J. Kaufmann, head of a prominent Pittsburgh department store, while working for a year as a designer of window and furniture displays.[8] This connection, along with Mitchell's reputation as a planner, resulted in Kaufmann selecting Mitchell & Ritchey in 1946 to prepare a study and exhibition, "Pittsburgh in Progress," to celebrate the store's seventy-fifth anniversary. "Pittsburgh in Progress" presented a daring vision of how Pittsburgh's infrastructure and natural environment could be transformed according to the tenets of modern planning and design.[9] The study's popularity and critical acclaim likely influenced Kaufmann's decision to engage the architects the next year to design a permanent home for the Civic Light Opera. In 1949, the Urban Redevelopment Authority of Pittsburgh entered into a contract with Mitchell & Ritchey to design an amphitheater

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[7] Ibid.
[8] Diane Gliozzi, "Famous Pittsburghers: Dahlen K. Ritchey (1910-2002)," Positively Pittsburgh, Inc., http://wwwpopularpittsburgh.com/pittsburgh-info/pittsburgh-history/famous-pittsburghers/ritchey.aspx.
[9] Ibid.

for the Civic Light Opera, which, in its final form, would be the Civic Arena.[10]

In addition to its work on the Civic Arena, Mitchell & Ritchey designed several distinguished Pittsburgh projects in the mid-1950s, including the John Kane Memorial Hospital (planning and design services), Donner Hall at Carnegie Institute of Technology, and Mellon Square, which received national acclaim as the first urban park situated atop a parking garage.[11]

Both Mitchell and Ritchey shared responsibility for producing working drawings, but Mitchell's chief responsibilities were planning and design, while Ritchey's chief responsibilities were business administration, supervision of work under construction, and checking of shop drawings. Work on the Civic Arena, as well the aforementioned projects, "was almost totally conceived, planned, and the details on them almost wholly determined" by Mitchell.[12] In the mid-1950s, Mitchell & Ritchey employed a staff of fourteen, exclusive of associates. The partnership was terminated on August 30, 1957, under very difficult circumstances, but the architects' work on the Civic Arena was nearly completed by that time.

In 1957, Mitchell relocated to Connecticut and organized the firm, James A. Mitchell, in 1958. Some of Mitchell's independent works of note include Holy Trinity Greek Orthodox Church, Pittsburgh, and the John F. Kennedy Recreation Center, Newark. Ritchey spent the remainder of his productive life in Pittsburgh, organizing the firm Deeter & Ritchey in 1959. In 1964, the firm was reorganized as Deeter, Ritchey & Sippel Associates, whose

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[10] Pittsburgh Tribune-Review, *Inside the Igloo,* 4.

[11] "Brochure On Background and Qualifications," Mitchell & Ritchey, ca. 1955 (in collection of Edward Mitchell).

[12] Letter from James A. Mitchell to Mitchell Kozikowski, General Chairman, Pittsburgh Junior Chamber of Commerce, January 25, 1962 (in collection of Edward Mitchell). See also the Amended Partnership Agreement between James A. Mitchell and Dahlen K. Ritchey, May 17, 1956 (in collection of Edward Mitchell).

successor firm, DRS Architects, operates to this day in Pittsburgh. Ritchey was involved in some of Pittsburgh's most noted redevelopment projects in the 1960s, including Allegheny Center and Three Rivers Stadium. Ritchey also was noted for major university projects in the 1960s and 1970s, including the Tower Dormitories and Trees Hall, University of Pittsburgh, and Wean and Cyert halls at Carnegie Mellon University (successor to Carnegie Institute of Technology).[13]

3. Original and subsequent owners, occupants, uses:

The Sports and Exhibition Authority of Pittsburgh and Allegheny County (prior to 1999 Public Auditorium Authority of Pittsburgh and Allegheny County) is the owner of the Civic Arena. The National Hockey League's Pittsburgh Penguins was the arena's primary user from October 1967 to May 2010. The building is presently vacant.

4. Agency Support, Contractors, Engineers, Suppliers:

Agency Support:
Public Auditorium Authority of Pittsburgh and Allegheny County
Urban Redevelopment Authority of Pittsburgh
Housing Authority of the City of Pittsburgh
Allegheny Conference on Community Development
Commonwealth of Pennsylvania
Federal Housing and Home Finance Agency[14]

Total Cost: $22 million (Initial investment was $1.5 million each by the City of Pittsburgh and Allegheny County and $1 million by the Edgar J. Kaufmann Charitable Trust, with the balance of funds provided by corporate and private

[13] Gliozzi, "Famous Pittsburghers."
[14] "From Blueprint to Reality…The Auditorium," 1956 (in collection of the Historical Society of Western Pennsylvania, Pittsburgh).

donations and short-term loans to the Public Auditorium Authority from fifteen county banks)[15].

Project coordinator and superintendent of construction: H. Rey Helvenston.

Contractors:
Excavation, foundation, and structural work: Dick Corporation, Large, Pennsylvania.
Plumbing: Wayne Crouse, Inc., Pittsburgh.
Roofing, Heating, ventilating, and ice rink: Limbach Company, Pittsburgh.
Electrical: E.C. Ernst, Inc., Pittsburgh.
Seating: American Seating Company, New York.
Roof Drive: Heyl & Patterson, Pittsburgh.
Cantilever truss erection: American Bridge division of U.S. Steel Corp.

Engineers:
Heating and air conditioning: John Mullin and Associates, Pittsburgh.
Plumbing and skating rink: Dzubay & Bedsole, Pittsburgh.
Electrical: Carl Long & Associates, Pittsburgh.
Moveable roof, truss, ring girder, and moveable stage: Ammann & Whitney, New York.
Arena area inside the ring girder: Robert A. Zern, Pittburgh.

Suppliers:
The Civic Arena was remarkable for the extent to which Pittsburgh corporations participated in its planning, marketing, design, production, and construction. Although not exhaustive, the following list highlights some of the major suppliers; firms are local except where noted.

[15] Jim Streiner, "Banks' Confidence Authority Loan Key," *Pittsburgh Sun Telegraph*, n.d. (in Civic Arena clippings file of DRS Architects, Pittsburgh).

Steel: U.S. Steel Corp., Allegheny Ludlum Steel Corp., Crucible Steel Co., Jones & Laughlin Steel Corp. Roof panel fabrication by Limbach Co.

Westinghouse provided much of the electrical equipment in the Civic Arena, including its power center, switch gear, automatic roof controls and leaf motors, electric motors for HVAC and ice refrigerating machinery, exterior flood lighting, and escalators.

Pittsburgh Corning Corp.: foam glass insulation; Koppers Co.: "Durethene" film vapor barriers; Pittsburgh Plate Glass Co: glass; Supervisory Data Center controls: Honeywell (Minneapolis).[16]

5. Original plans and construction:

The Civic Arena was conceived as a multipurpose building, serving as the region's sports arena, convention center, and home to the Civic Light Opera. The need to house such a diverse range of events resulted in several character-defining features of the building, including its retractable steel roof, hydraulic lift moveable stage, and provision for ground floor exhibit hall space that could be utilized in conjunction with the main arena floor. With the exception of the ground floor, which is banked a full story on its east side, the arena is circular in plan. The main (west) entrance is approached by a gently sloped landscape corridor that leads to the ground (or first level) doors.

The west side of the first floor originally contained exhibition space and locker and dressing rooms, followed by the arena floor at center. The arena floor is ovoid in shape, and a moveable stage was located at the center of its west side, with convertible support areas for sets and lighting located directly behind (west of) the stage. An

[16] "The Big Umbrella: Pittsburgh's Public Auditorium," Limbach Construction Report, Issue 61-3 (in Civic Arena clippings file of DRS Architects, Pittsburgh).

orchestra pit was depressed 2′-8″ below the arena floor level. Access to the arena floor for large vehicles and equipment is provided at its north and south ends, through Gates 5 and 2, respectively, and the seat sections above these areas can be raised several feet by hydraulic lifts to increase vertical clearance. Passageways located in the northwest and southwest corners of the arena floor connect it with the visitor and home teams' locker rooms, respectively.[17]

The southeast quadrant of the first floor contains storage rooms and access tunnels leading to the electrical equipment and roof control rooms at the building's periphery. The northwest quadrant of the first floor contains the main mechanical rooms housing rink refrigeration equipment, water chilling units for the air conditioning system, a Supervisory Data Center for generators, chillers, compressors, fans, and lights, as well as additional electrical equipment. The arena does not contain a true basement level, but rather a series of two service tunnels. The larger tunnel measures 14′ wide and 12′ high and serves as a HVAC fresh air tunnel, houses sewerage, water, and electrical conduits, and collects water from floor drains. A smaller tunnel runs below the east perimeter of the arena floor to access the rink refrigeration lines. A pit housing the hydraulic lift mechanism for the moveable stage extends 43′-3″ below the level of the arena floor.[18]

The sloped topography of the site allows for at-grade entrances to the second floor on the north, south, and east sides of the building. A pair of symmetrical semi-circular ramps leads from the west side of the building to the main second floor entries on the north and south sides of the building, which is located 16′-3-5/16″ above the first floor level. A 50′-wide promenade deck encircles the entire building at the second floor level, which serves as the primary entry level for the public. The periphery of

[17] See architectural drawings A-1, A-2, A-6, A-20, and A-21.
[18] See architectural drawings A-1, A-2, A-6, A-20, A-21, and A-31.

the second floor serves as public lobby space. Restrooms and concession stands are located near each of the four corners of the seating bowl. HVAC equipment rooms are located on the north and south sides of the second floor public space. The west side of the second floor originally contained meeting rooms, and the east side of the second floor originally contained office space. Seating sections A and B can be accessed from twelve second floor vomitoria.[19]

Pedestrian ramps, located near each of the four corners of the seating bowl, provide access between the second and third levels of the arena. Level three is located 16'-5-7/16" above level two and is approximately even with the concrete ring girder that supports the roof. Restrooms and concessions are provided on the west and east sides of the third floor; the north and south sides of the third floor contain only passageways. Seating sections C and D are accessed from six third floor vomitoria.[20]

An interior roof maintenance platform is suspended from the cantilever truss supporting the roof. The platform contains electrical equipment for the scoreboard, sound system, and floor lights, as well as hoisting mechanisms for the same. The flexible electrical conduits that supply power for lighting in each of the eight roof leaves are exposed and visible from the roof maintenance platform, as are the two multiple clevis pinned connections that secure the roof leaves to the cantilever truss.[21]

6. Alterations and additions:

Exterior:
With the exception of alterations to the landscape plan, which are discussed in section II.D.1, the Civic Arena has received few exterior alterations since its completion in September 1961. The only major exterior alteration to the

[19] See architectural drawings A-3, A-6, A-20, and A-21.
[20] See architectural drawings A-4, A-6, A-20, and A-21.
[21] See architectural drawings E-16 and MR-3b.

building has been the expansion of the concourse area on the east side of the promenade deck ca. 1997. The expansion involved an addition, on the east side of the building, of a 23′-4″ deep x 13′ tall section between twenty-eight (of forty-eight total) concrete A-frame ring girder supports. The addition contains a glass window wall with 8′-4″ high x 4′-6″ wide glazed sections surmounted by 2′-3-1/2″ high x 4′-6″ wide aluminum panels. Mullions are also aluminum. Side walls of the addition are similar except the 8′-4″ lower wall sections are aluminum panels rather than glazed. The addition includes three new public entrances (Gates 1, 10, and 8) as well as two new minor entrances at Gates 7 and 9. Entry doors are similar in style to the originals; double doors are single-light glazed type with aluminum frames. A new box office with six ticket booths was constructed immediately west of Gate 1[22].

On the first floor level, the three bays flanking the entrance at present Gate 3 originally contained twenty-two porcelain enamel panel sections per bay. Each panel measured 1′-4″ wide and 9′-1″ high and alternating panels were set diagonally in opposing direction so as to create a zigzag pattern. Ca. 1990 (stylistic estimate), the porcelain enamel panels were removed from the one bay to the south of and two bays to the north of the Gate 3 entry doors; each of these three bays was replaced with a six-section window wall.[23]

Ca. 1982: the arena was taken off of the district steam system; a detached boiler room containing two boilers was constructed near the cooling towers.

Interior:
Ca. 1975: addition of two E Level balconies containing a total of 3,250 seats; construction of twenty-three super boxes, additional restrooms and concessions. The arena

[22] See architectural drawings A-103, A-104, A-201, and A-802.
[23] See architectural drawings A-12 and A-22.

originally contained only 10 concession stands and no kitchen facilities; it is likely that the present kitchen on the southwest side of the first floor was constructed at this time.

Ca. 1989-1991: reconstruction of the Igloo Club, installation of new A Level seats, installation of computerized ice making system; concert stage replaced.
Ca. 1993: construction of two F Level balconies containing a total of 1,100 seats; six new luxury sky boxes; sixteen executive vomitoria; eighty-eight privately catered club seats; and a press box on the west side of the arena with ninety-two fixed seats.

Ca. 1997: Reconfiguration of areas beneath the seating bowl into east and west lounges. The remodel of the west lounge space required that the moveable stage section be fixed in place;[24] installation of Jumbotron (video playback) scoreboard, weighing 36,000 pounds.[25, 26]

B. Historical Context:

Pittsburgh's Arena: A History of Controversy

Although praised universally when it opened in 1961, the Civic Arena quickly became one of the most controversial buildings in Pittsburgh's history. Its most vaunted architectural feature, a retractable roof, proved early on to be an unsuccessful feature of a light opera venue, a core use anticipated for the arena. More serious, its location made it part of an unfortunate chapter in urban renewal, one that caused the demolition of the heart of Pittsburgh's most historic African American neighborhood and the displacement of well over a thousand residents. The arena attracted thousands of fans, both black and white, to its many events, and its distinctive dome-shape became an iconic image for the city, but for many it came

[24] See architectural drawings I111 and I102.
[25] Mellon Arena "Design Facts" sheet, prepared by Spectator Management Group, n.d.
[26] Pittsburgh Tribune-Review, *Inside the Igloo,* 36-37.

to symbolize an unfortunate process of urban renewal. This, in turn, cost it the support of the city's black leadership, a loss which hindered efforts by preservationists to save it.

Both before and shortly after its opening on September 17, 1961, the Civic Arena received rave reviews. *Architectural Forum* waited in anticipation as "Pittsburgh's Dome Gets Ready," *Fortune* magazine noted that it was the "World's Biggest Dome, and It Moves," *Holiday*, *Vogue,* and *Look* magazines praised the arena as part of the city's renewal, and *Esquire* rhapsodized that its retractable roof could be opened to let in "a moon-sliver's view of the warm, velvet-soft summer's night."[27]

Although he did not live to see its completion, certainly no one would have been happier with the new arena than Edgar J. Kaufmann, a benefactor of the local Civic Light Opera (CLO) and owner of a prominent department store that bore his family's name. Kaufmann had long been unhappy that CLO performances at the football stadium of the University of Pittsburgh put them at the mercy of the weather. A fan of modern architecture, Kauffman had engaged Frank Lloyd Wright to build his summer home, Fallingwater, which quickly became recognized as one of the nation's most innovative private residences.[28] In 1949, he offered Mayor David Lawrence $500,000 if the city would build a new arena suitable for light opera, an offer later increased to $1,000,000 if it had a retractable roof.[29]

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[27] "Pittsburgh's Dome Gets Ready," *Architectural Forum* (March 1961), pp. 122-125; "World's Biggest Dome, And It Moves: Pittsburgh's New Auditorium," *Fortune* (February 1961), pp. 102-107; Herbert Kubly, "Pittsburgh," *Holiday* (March 1959), pp. 80-87; "Futurity Stake: Pittsburgh," *Vogue* (Feb 1, 1960), pp. 134-135; "Return of the Native," *Look* (December 8, 1959), pp. 70ff; Herbert Kubly, "Pittsburgh's Magic Dome," *Esquire* (September, 1960), pp. 84-85. See also Patricia Lowry, "Architect Who Designed Pittsburgh Civic Arena, Mellon Square, Dies at 91," *Pittsburgh Post-Gazette*, January 15, 2002; Franklin Toker, *Pittsburgh: A New Portrait* (Pittsburgh: University of Pittsburgh Press, 2009), p. 271;.

[28] Franklin Toker, *Fallingwater Rising* (New York: Knopf, 2003), Prologue.

[29] Toker, *Fallingwater Rising*; Michael P. Weber, *Don't Call Me Boss: David L. Lawrence, Pittsburgh's Renaissance Mayor* (Pittsburgh: University of Pittsburgh Press, 1988), pp. 266, 271.

Neighborhood opposition and fear of law suits scuttled original plans to locate the arena in Highland Park or Schenley Park. Mayor Lawrence and the Urban Redevelopment Authority of Pittsburgh (URA) then decided to locate the arena in the Lower Hill District and make it part of an on-going set of initiatives known as the "Pittsburgh Renaissance."[30] The Renaissance, spearheaded by Richard King Mellon and Pittsburgh's corporate elite through an organization known as the Allegheny Conference on Community Development (ACCD), had had great success in smoke abatement and flood control, as well as in transforming the Point (the part of downtown Pittsburgh bordering the place where the Allegheny and Monongahela rivers join to form the Ohio River) from a dingy industrial and railroad complex into a park (Point Park) and a complex of office buildings known as Gateway Center. These major projects, aimed at keeping Pittsburgh a leading corporate center, garnered widespread praise and, according to one architectural historian, rank as "one of the most intensive reconstructions of any city center in history."[31]

The Arena and Urban Redevelopment

Crucial to the success of the Renaissance was the fact that the city's political establishment worked closely with its business elite. Mayor Lawrence, dubbed Pittsburgh's "Renaissance Mayor," facilitated this cooperation by creating the URA, a powerful ally with the all-important power of eminent domain.

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[30] Michael P. Weber, *Don't Call Me Boss*, pp. 266-268. Sherie R. Mershon, "Corporate Social Responsibility and Urban Revitalization: The Allegheny Conference on Community Development, 1943-1968," (Ph.D. dissertation, Carnegie Mellon University, 2000), pp. 102 and 506, describes earlier ideas to create city auditorium at the Point.

[31] For example: *Cinderella City: How Community Action Transformed Pittsburgh's Smoke-Stained Identity,* National Association of Manufacturers, Current Issue Series, No. 12, Economic Problems Department (December 1962), pp. 8-10; Marchall Stalley, "Pittsburgh and the Allegheny Conference: Effort Toward a Unified Community Program for the Region," *Landscape Architecture*, 38 (July 1948), p. 150; Harry Henderson, "You'd Never Know Pittsburgh," *Collier's*, 131 (May 30, 1953), p. 60; Toker, *Pittsburgh*, p. 20; Barbara Ferman, *Challenging the Growth Machine: Neighborhood Politics in Chicago and Pittsburgh* (Lawrence, Kansas: University of Kansas Press, 1996), pp. 44-54.

About the time that Kaufmann made his offer to Lawrence in 1949, the URA had begun to turn its gaze beyond the central business district, particularly to the Lower Hill District. A socially dynamic but physically dilapidated neighborhood just east of downtown, the neighborhood was inhabited primarily by African Americans and a diminishing number of Jews, Italians, and other immigrant groups who formerly had constituted a major part of its residents. It also was the city's most historic and dynamic black neighborhood, blessed with life and vitality as well as cursed with deplorable housing.

In 1951, the URA announced its intention to redevelop the Lower Hill, and in 1952, it suggested integrating the Civic Light Opera project into its plans.[32] The arena sought by Kaufmann would become the centerpiece of a cultural district, an "Acropolis on the Hill" reminiscent of ancient Athens, and designated the "Center for the Arts." The surrounding area would have a combined grand opera house and symphony, a two-theater playhouse, an art gallery, and an upscale hotel and apartment buildings that would attract middle-class residents. *Esquire* magazine predicted the area would become "one of the great public meeting places of the world, a cultural and sports center bringing to the people symphonies, operas and drama, basketball, hockey and tennis, conventions, forums and exhibitions."[33] Ultimately, plans were afoot to extend redevelopment far up the Centre Avenue corridor all the way to the Oakland neighborhood, thereby linking the Point, the planned cultural district, and the educational complex of Carnegie Tech and the University of Pittsburgh.[34]

The URA had originally opposed locating the arena in the Lower Hill because they were concerned about re-housing its many residents.[35] Others, however, had no such qualms. City Councilman George Evans, for example, dismissed the

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[32] Weber, *Don't Call Me Boss*, p. 270.
[33] Kubly, "Pittsburgh's Magic Dome."
[34] William J. Mallett, "Redevelopment and Response: The Lower Hill Renewal and Pittsburgh's Original Cultural District," *Pittsburgh History* (Winter, 1992), pp. 177-182.
[35] Weber, *Don't Call Me Boss*, p. 266, fn 22.

Hill as a slum neighborhood so deteriorated that "there would be no social loss" if it were destroyed.[36]

Demolition began in November, 1956, and displaced 1,551 families, eighty percent of which were black. Only twenty-three percent of displaced families went into public housing, and the rest, numbering some 1,090, simply relocated on their own, with no governmental assistance and no records kept of what became of them. Most settled elsewhere in the Hill or in Homewood-Brushton, in Pittsburgh's east end.[37] This cavalier attitude toward the fate of the Hill's residents tarnished the image of the arena, which became the symbol for thoughtless, uncaring, top-down planning. A city official, when asked about the displacement of so many residents, replied in a thinly veiled racial remark that some were relocated while others "simply loaded their TV's into their pink Cadillacs and drove away."[38]

Arena Shortcomings and patronage

Not long after its opening, high hopes for the arena came crashing back to earth. The roof, when opened, exposed audiences to wind, noise, and bad weather as well as to starlit skies. By the late 1960s, the dome seldom was opened, and since 1993 has never been opened. The dome's acoustics, moreover, were so bad that within a decade the Civic Light Opera had abandoned the building. And the hoped for "Acropolis on the Hill," with a symphony hall, theater, and art gallery, never materialized.[39] By 1966, the area contained only the arena (completed in 1961), Washington Plaza Apartments (a 396-unit luxury apartment

[36] Michelle Fanzo, "The Hill District," *The Observer* (June 1995), p. 17.
[37] William J. Mallett, "Redevelopment and Response: The Lower Hill Renewal and Pittsburgh's Original Cultural District," *Pittsburgh History* (Winter, 1992), p. 183.
[38] Kubly, "Pittsburgh's Magic Dome."
[39] *City Paper*, July 29, 2010

building designed by I.M. Pei), and the Chatham Center apartment and hotel complex (1966).[40]

Despite its shortcomings, the arena drew throngs to see sporting events. The Pittsburgh Penguins hockey team played three Stanley Cup Championship-winning seasons in the arena, and the American Basketball League's *Rens*, the American Basketball Association's *Pipers*, World Team Tennis's *Triangles*, the Arena Football League's *Gladiators*, and boxers Muhammad Ali and Larry Holmes figured among the building's many storied sporting events.

The arena also attracted such big-name entertainers as the Beatles, Ray Charles, The Beach Boys, Willie Nelson, Kenny Rogers, Madonna, and Michael Jackson. Major traveling shows that used the arena included the Barnum & Bailey Circus, the Harlem Globetrotters, and the Ice Capades. Major movies that were shot at the arena included *The Fish that Saved Pittsburgh* (1979), *Sudden Death* (1995), *Rock Star* (2001), and *She's Out of My League* (2010).[41]

The arena also hosted events that endeared it to the Black community. The National Association for the Advancement of Colored People held two Freedom Rallies there in 1963 and 1964. Lyndon Baines Johnson spoke there of his "Great Society" program and "War on Poverty" in 1966. Jazz festivals showcased such greats as Ray Charles, Dakota Staton, and Sarah Vaughan. Rhythm and Blues performers included James Brown, Aretha Franklin, and the Supremes.

Blacks and the Arena

Black community leaders originally supported the arena for its promises of a new Pittsburgh and of new housing and jobs for residents. Homer Brown, state legislator and later Pittsburgh's first Black judge, insisted simply that Blacks not be excluded from residing in the redeveloped

[40] In 1974 was constructed the Central Medical Pavilion Hospital, next to Washington Plaza Apartments, and demolished in 2008 to make way for the new Consol Arena.

[41] For a fuller list see Preservation Pittsburgh, Historic Nomination Form of the Civic/Mellon Arena to the City of Pittsburgh Historic Review Commission," November 23, 2010.

area.[42] In 1960, the local African American newspaper, *The Pittsburgh Courier,* heralded "the retractable roof of the silver domed new arena on the Lower Hill," as evidence of a city with "a bright future—and growing ever brighter!"[43]

By the time the arena opened, however, the black community had developed major criticisms of redevelopment in general and the arena in particular. The first criticism involved jobs. Blacks had been told that redevelopment would mean employment, and yet black labor was not used in erecting the arena. The second criticism concerned housing. The city did not keep its promise that those displaced would get adequate housing before they had to move, something mandated by both state and federal laws.[44]

By December, 1961, a few months after the arena opened, the *Courier* began criticizing the project, saying it "swept under the rug its dregs of human misery—those displaced persons … who either have not been relocated or are unable to find suitable housing on their own."[45] In 1962, local NAACP head Byrd Brown condemned the entire process with the slogan "Urban renewal means Negro removal."[46]

Complaints about jobs and housing were exacerbated by a third complaint: being left out of the decision-making loop. Councilman James Jordon clashed publicly with Robert Pease, executive director of the URA, and complained that, though he was chair of the city council committee on redevelopment, the URA had not given him "the courtesy of [being] informed as to what was going on."[47]

Resentment and worry led to resistance. In April, 1968, riots engulfed much of the Hill District following the

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[42] Constance A. Cunningham, "Homer S. Brown: First Black Political Leader in Pittsburgh," *Journal of Negro History*, (Winter, 1981-1982), pp. 304-317.
[43] Harry Brooks, "The City with a Brighter Future," *Pittsburgh Courier*, December 31, 1960.
[44] Weber, *Don't Call Me Boss*, pp. 272-273. "Redevelopment Authority Hears Need for Homes; NAACP Presents Case," *Pittsburgh Courier*, November 19, 1955.
[45] Phyl Garland, "Help Us!" Urban Renewal 'DP's' Plead," *Pittsburgh Courier*, December 23, 1961.
[46] "Pittsburgh This Week," *Pittsburgh Courier*, December 8, 1962.
[47] George Barbour, "Jordon, URA in Clash on Hill Project," *Pittsburgh Courier*, June 13, 1964.

assassination of Martin Luther King, and by September a grass-roots organization called the Citizens Committee for Hill District Renewal erected a famous billboard at the corner of Centre Avenue and Crawford Street declaring: "Attention: City Hall and URA. No redevelopment beyond this point."[48]

Scholars also attacked the arena. In 1995, urban historian Roy Lubove described the project as "a highly visible symbol of old-style renewal, indifferent to the housing needs and preferences of low-income families."[49] In 2004, psychiatrist Mindy Thompson Fullilove published a study of urban renewal in Pittsburgh and several other cities. The book's title, *Root Shock*, revealed her attitude toward the process.[50]

The arena's major scholarly defender was Michael Weber, biographer of David Lawrence, who stressed that the plan originally had been supported by "virtually every segment of the community," and that Lawrence had tried to address the housing needs of the residents by creating Private Housing Incorporated (forerunner of Action Housing) and passing a Fair Housing Act in 1958. Weber called the Lower Hill "a prime site for urban redevelopment" because it had deteriorated "beyond the point of rehabilitation." [51]

Architectural historian Franklin Toker, sees the arena as the tragic victim of urban renewal gone awry, arguing that the "debacle" of the larger planning effort "denied a brilliant achievement of twentieth-century engineering the acclaim it deserved."[52]

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[48] "Too Little, Too Late?" Teenie Harris photo and caption, *Pittsburgh Courier*, September 7, 1968.
[49] Roy Lubove, *Twentieth-Century Pittsburgh, vol. 1: Government, Business, and Environmental Change* (Pittsburgh: University of Pittsburgh Press, 1969, 1995), pp. 131-132.
[50] Mindy Thompson Fullilove, *Root Shock: How Tearing Up City Neighborhoods Hurts America, and What We Can Do About It* (New York: One World/Ballantine Books, 2004).
[51] Weber, *Don't Call Me Boss*, pp. 271-272. Weber did not mention, however, that parishoners of the Italian-American St. Peter's church protested the church's destruction.
[52] Toker, *Pittsburgh*, p. 271.

The Controversy: To Demolish or Preserve

The arena's controversial history left it vulnerable. Plans to tear it down emerged when its major tenant, the Pittsburgh Penguins hockey team, declared bankruptcy and, in 1999, was purchased by former player Mario Lemieux and a group of investors.[53]

Seeking ways to turn around the team's fortunes, the new owners sold the naming rights to the arena to Mellon Financial Corporation,[54] changing the name from Civic Arena to Mellon Arena, and declared they needed public funding for a new, larger arena that could function comparably with other arenas used by teams of the National Hockey League.[55] The new arena was to be built on Fifth Avenue, just south of Mellon Arena.[56] Such a location would place the Penguins at the edge of the old Civic Arena site, a piece of prime real estate close to downtown with great potential for redevelopment.

Plans for a new arena raised questions about the fate of the old arena. City Councilman Sala Udin, representing the Hill District, asked, "[D]oes any thoughtful Pittsburgher really believe that it is sound land use policy to have two arenas next door to each other?"[57] Udin advocated demolishing the arena and developing the site, which he felt would benefit the city and right a 50-year "costly mistake."[58]

Such pronouncements galvanized preservation groups into action. In May, 2002, Pittsburgh History and Landmarks

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[53] Richard Sandomir, "Hockey: Lemieux Can Keep Penguins in Pittsburgh," *New York Times*, June 25, 1999.
[54] Tom Barnes, "Mellon Buys Naming Rights to Pittsburgh Hockey Team's Arena," *Pittsburgh Post-Gazette*, December 22, 1999. The Pirates baseball team opened its new stadium in April, 2001, called PNC Park after PNC Bank agreed to pay $30 million over 20 years to put its name on the building.
[55] This conclusion came from a study commissioned in 2001 by the team. "Study Says New Arena is Pittsburgh Penguins' Best Bet," *Pittsburgh Post-Gazette*, June 13, 2001; "Pittsburgh Penguins Push for Public Funding to Build New Hockey Arena," *Pittsburgh Post-Gazette*, March 11, 2002.
[56] "Pittsburgh Penguins Push for Public Funding to Build New Hockey Arena."
[57] Sala Udin, "Forum: The Civic Arena is an Obstacle," *Pittsburgh Post-Gazette*, June 2, 2002.
[58] Ibid.

Foundation (PHLF) and Preservation Pittsburgh, nominated the arena as a city historic structure, a designation that would require approval of the Historic Review Commission for demolition or exterior changes.[59]

Preservationists suffered a string of setbacks when, in August, 2002, the Historic Review Commission rejected historic designation,[60] and the following February, City Council voted against granting it landmark status.[61] Then, in 2007, the Penguins accepted an offer that, in exchange for a thirty-year lease to stay in Pittsburgh, a combination of private and public funds would be used to construct a new arena and the Penguins would be given the development rights to the old Civic/Mellon Arena site.[62]

Hill District leaders insisted they would agree to such a deal only if the community received benefits. In 2008, after contentious negotiations, Carl Redwood, as chairman of the One Hill Community Benefits Agreement Coalition, later the Hill District Consensus Group, worked out a community benefits agreement with the Penguins that gave qualified local residents the first opportunity at jobs in the Penguins new arena (Consol Energy Center) and the adjacent Cambria Suites Hotel. That agreement, called "the first of its kind in Pennsylvania" by the *New York Times*, resulted in nearly 40 percent of the new jobs at the center and the hotel going to local residents.[63] The Penguins and the city's Urban Redevelopment Authority also committed $1 million each toward a 30,000-square-foot supermarket on Centre Avenue, three blocks east of the Consol Energy Center.[64]

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[59] "Groups Nominate Pittsburgh's Mellon Arena for Historic Designation," *Pittsburgh Post-Gazette*, May 13, 2002.
[60] Tom Barnes, "Mellon Arena Dealt Landmark Setback," *Pittsburgh Post-Gazette*, August 8, 2002.
[61] George Aspiotes, "Historic Status for Mellon Arena Rejected," *Tribune-Review*, February 27, 2003.
[62] Mark Belko, "Arena Deal Keeps Penguins in Pittsburgh," *Pittsburgh Post-Gazette*, March 13, 2007.
[63] Christine H. O'Toole, "Pittsburgh Pursues Plan to Demolish 'the Igloo,'" *New York Times*, March 8, 2011.
[64] Ibid.

Penguins move into Consol Energy Center

In August, 2010, the Penguins moved into their new $321 million arena, the Consol Energy Center, located just a block from the old arena.[65] The controversy continued over what to do with the old arena. The Penguins proposed a concept plan for the site, which includes a mix of residential and commercial development, as well as re-knitting the Hill's street pattern into downtown.[66]

In March, 2011, the City Planning Commission approved the Project Development Plan to demolish the old arena.[67] Following that decision, Eloise McDonald, a local Hill District resident, nominated the arena for historic status. Rob Pfaffman, head of Reuse the Igloo citizens group, proposed keeping the arena and building offices and stores around it and/or adapting the arena to other uses, such as an indoor town square.[68]

The historic nomination was reviewed by the City Historic Review Commission and the City Planning Commission. In March, 2011, both Commissions separately and unanimously voted to recommend to City Council that the arena not be designated as historic.[69]

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[65] Belko, "Arena Deal."
[66] "City Planning Commission: Tear down arena," *Pittsburgh Tribune-Review*, March 23, 2011.
[67] Ibid.
[68] Ibid.
[69] Ibid.

Part II. ARCHITECTURAL INFORMATION[70]

A. General Statement:

1. Architectural character:

In October 1960, almost a year before the Civic Arena's completion, Gwilym A. Price, Chairman of Westinghouse Electric Corporation and head of the Pittsburgh Progress General Committee, remarked during the first public tour of the arena, "As we have watched the great Cyclopean eye emerge…we have become increasingly aware that we have had in the making a striking new symbol for our city."[71] Price remarked further that the area "will take its place with Point State Park, Gateway Center, Mellon Square, and the Fort Pitt Tunnel as one of the wonders of Pittsburgh's Golden Triangle."[72] Price's comments make it clear that the Civic Arena was celebrated locally, as the jewel of Pittsburgh's Renaissance and as a symbol of the city's power to transform itself to a modern and civilized place. The triumph of the Civic Arena was one of both artistry and innovation. The building is significant as an example of the mid-century modern style, and the eloquence of its space-age form is particularly striking. The simplicity of the arena's exterior belies the complexity of its engineering design and mechanical features.

Arena designers were challenged not only by the task of creating a building that could function year-round as a sports arena, concert hall, theater, and convention center, but also by housing such disparate functions in a building

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[70] Note: when building bay numbers are referenced in building descriptions, the bay number sequence begins with bay 1, located on the south side of the cantilever arm, and proceeds in a clockwise fashion ending with bay 48 on the north side of the cantilever arm. Bay divisions are demarcated by the 48 concrete A-frame ring girder supports, which are visible on the promenade deck level.

[71] *Fortune*, February 1961 (in Civic Arena clipping file of DRS Architects, Pittsburgh.

[72] Clayton Knowles, "Pittsburgh Gets New Auditorium," *New York Times*, October 11, 1960.

that could function as both a covered and open air amphitheater. The result was not only the world's largest dome, but the world's first stainless steel retractable dome. Unusual and innovative arena features included its cantilever space frame roof support truss; a seating section that could be lifted hydraulically 35' to create a stage, complete with an orchestra pit, for Civic Light Opera productions; fully automatic roof controls that could open the structure as the press of a button in 2.5 minutes; and integrated mechanical systems centrally controlled by a Supervisory Data Center.

The Civic Arena represents the zeitgeist of the space-age era, displaying a faith in science and technology to elevate the condition of man. What is particularly striking fifty years after the completion of arena is the degree to which its construction was a collaborative effort to benefit the citizens of Pittsburgh at large. The arena project itself involved unprecedented cooperation between Pittsburgh politicians and powerful corporate interests. With the exception of Ammann and Whitney, consulting engineers for the roof and ring girder, nearly every architect, engineer, contractor, and supplier that participated in the building's construction was from the Pittsburgh region, and the majority of building materials were made in the Pittsburgh region. Perhaps more than any other structure before or since, the Civic Arena was thoroughly a product of Pittsburghers for Pittsburghers.

What is also remarkable fifty years after the construction of the arena is the degree to which it was, at least initially, a truly civic structure. The arena's original seating design had no hierarchical arrangement of seats; there were no super boxes or private dining areas. All seats were of the same design, and simple concession stands were the only choice for dining, as there were no kitchen facilities. Although Pittsburgh's corporate elites were the driving force behind the development of the Civic Arena, the building was not the domain of elites. The arena was, at its best, a gift to the common man, a place

in which any Pittsburgher could experience a multitude of cultural diversions—from light opera and symphony, to circuses, car shows, rock concerts, and sporting events—in a building that was truly his own.

2. Condition of fabric:

When the Civic Arena was photographed in December 2010, it had been closed for about five months. The building had not suffered any major deterioration during this period, as HVAC systems remained in use and the building remained staffed at all times to take care of critical maintenance needs. The building is in good structural condition overall, and its mechanical systems are generally in operable condition. Maintenance staff indicated that there are some problems with roof leakage and that the rink refrigeration pipes are in poor condition.[73]

B. Description of Exterior:

1. Overall dimensions:

The building's domed roof is over 400' in diameter and 136' high. The actual diameters of the roof are 403' (north to south) and 413' (east to west), with the slight difference caused by the 10' spacing of the two multiple clevis weldments which secure the roof leaves to the cantilever support truss. The building's concrete podium extends for approximately 65' beyond the vertical ring girder support columns, including an approximately 45'-wide promenade deck that encircles the entire building and two approximately 15'-wide ramps on the west half of the building. The east side of the building lacks ramps, since the promenade deck is at grade. The first level is 16'-3-5/16" high and the second level is 16'-5-7/16" high.[74, 75]

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[73] Marv Ehlers, personal communication, December 2, 2010.
[74] See architectural drawings A-6 and A-22.
[75] "Constructing a Unique Auditorium," s.n., n.d. (in Civic Arena clipping file of DRS Architects, Pittburgh).

2. Foundations:

Building foundations are constructed of reinforced concrete.

3. Walls:

Podium walls, including those of the integral pedestrian ramps, parapets, and decorative planter boxes are constructed of reinforced concrete with a decorative aggregate finish of locally-sourced crushed limestone historically known as Ligonier block.

The first floor level walls in the area flanking the central west entrance (Gate 3) contain six bays of window walls; the remainder area between these bays and the pedestrian ramps is reinforced concrete with an aggregate finish similar to other sections of the podium. To the north of Gate 3, two bays are glazed and one bay is filled with silver porcelain enamel panels. To the south of Gate 3, one bay is glazed and two bays are filled with silver porcelain enamel panels. Glazed bays contain six vertical divisions with aluminum mullions; glazed units are two-light, with a small rectangular light surmounted by a large rectangular light about three times greater in height.[76]

At the second floor (or promenade deck) level, the arena is ringed by a continuous band of aluminum framed window walls. The window walls rise from the floor level of the promenade deck to that of the ring girder. Original windows are single-light type, running the full height of the second floor. Mullions are generally spaced 5’-3-1/2”, resulting in five window sections between each of the forty-eight A-frame ring girder columns. A number of the window walls on the west side of the building are three-light type with evenly spaced horizontal muntins. Window walls on the concourse expansion area on the east half of the building, between A-frame columns 35 and 48 and columns

[76] See architectural drawings A-12 and A-22.

1 and 14 are similar in configuration to the original single-light window walls except that the glazed portions are not full height, but rather are surmounted by 2′-3-1/2″ tall aluminum panel infill sections.

The new (1997) window walls have 1″ dual insulated glazing, while the original have single glazing. A number of the windows in this section have had screened images of Penguins players installed covering the entire surface of the window. The window walls in the concourse expansion area terminate 3-1/2′ below the base of the concrete ring girder. The space between the concourse addition roof and the base of the ring girder is filled with single-light glazed sections, which are set diagonally in line with the A-frame columns.[77]

4. Structural system, framing:

Ring girder:

The roof leaves rest upon a series of trolley type steel rails supported by a 20′-wide reinforced concrete ring girder. The ring girder is banked at an angle of 13 degrees to resist the thrust of the roof leaves. Forty-eight concrete A-frames, spaced 26′ apart, support the ring girder. Ring girder sections are continuous over four 26′ A-frame spans, and expansion joints are provided between ring girder spans. The ring girder and A-frame column exterior surfaces are unfinished formed concrete, with visible plywood form marks.[78]

Cantilever truss:

The eight roof leaves are supported by a 1,400 ton triangular space frame cantilever arm consisting of seven sections plus and end assembly containing the leaf pivot pins. The cantilever frame projects 205′ over the auditorium from the center of the ring girder. In the

[77] See architectural drawings A-22 and A-401.
[78] *Engineering News-Record*, November 19, 1959.

upper sections, the arm is a riveted double box section with the fabricated top half erected as a massive inverted channel on the bottom half. The main 8′ wide x 17-1/2′ deep box girder follows the curve of the roof. The two upper legs of the tripod frame curved chords, measuring 3′ x 3-1/2′, act as tension tiebacks. Thirty-five tons of lighting, electrical, and HVAC equipment are suspended below the pivot section on an interior roof maintenance platform, which is commonly known as the crow's nest. The two upper legs terminate in concrete anchorages and are connected to the main box girder by triangular frames consisting of struts and cross ties. When the leaves are moved into a nested position, the end of the cantilever frame moves outward 3″ and downward 6″. The two sets of roof leaves (each set comprised of one fixed and three moveable leaves) are attached to the cantilever frame by two multiple clevis weldments spaced 10′ apart. The main box girder has an interior staircase that is used to access the interior roof maintenance platform as well as the exterior of the roof itself.[79, 80]

5. Porches, balconies, bulkheads:

The Civic Arena contains a ca. 45′ wide promenade deck and associated ca. 15′ wide ramps, which serve as both circulation paths and balconies. Because smoking has always been prohibited inside the arena, the promenade also served, less glamorously, as a smoking area.

6. Openings:

a. Doorways and doors:

Exterior doors are typically paired, natural finish aluminum frame, single-light glazed units. The first floor entrance on the west side of the building (Gate 3)

[79] "Putting the Lid on Pittsburgh's Auditorium," *Engineering News-Record,* November 3, 1960.
[80] "Constructing a Unique Auditorium" (in Civic Arena clipping file of DRS Architects, Pittsburgh).

contains five pairs of doors flanked by silver porcelain enamel panels. The remaining original doors on the west side of the promenade deck (second level) contain three pairs of doors flanked by one glazed window wall section. Original entries contain a vestibule with a second set of similar doors. Vestibule walls flanking the inner doors are not glazed but rather are constructed of glazed vitreous tile block laid in a stack bond pattern. The entry doors in the concourse addition areas of the promenade deck level (east side of the building at grade) are similar in appearance to the original doors except that they contain four pairs of doors, are recessed from the surrounding window wall sections, and do not contain a second set of vestibule doors. Large metal overhead doors are present at the north (Gate 5) and south (Gate 2) loading dock areas.

b. Windows:

The Civic Arena contains no operable windows. All exterior windows are technically window walls and are thus described in section II.B.3, “Walls.” The first floor originally contained no window walls at all; the three bays of window walls that are extant were formerly filled with silver porcelain enamel panels. Exclusive of main entry doors, the promenade deck level was a continuous band of window walls punctuated by the forty-eight concrete ring girder support columns. This arrangement was altered with the ca. 1997 expansion of the east concourse between bays 35 and 48 and bays 1 and 14.

7. Roof

The stainless steel clad, domed roof measures 403’ (north-south) and 413’ (east-west), and contains two fixed and six movable leaves. The two fixed leaves flank the cantilever truss girder. The eight roof leaves are framed with structural steel. Each leaf contains seven ribs with 30”-wide flange beams and 8”- and 10”-deep purlins. Each roof

leaf weighs 300 tons, measures 250′ along its curve, and is about 3′ thick. Leaf slope is 1:30, or about 6″ for every 15′ rise. Edward Cohen, of Ammann & Whitney, consulting engineers for the roof, describes the roof leaf connections thus: "At the apex of each leaf is a pivot weldment with a spherical steel knuckle which is pinned into a multiple clevis weldment which delivers the leaf thrust, a maximum of 350 tons, through the pivot to the cantilever frame." When the roof is in the closed position, small gaps between overlapping parts are sealed by the automatic tensioning of cables that pull neoprene gaskets into bearing against stops on adjoining components.[81, 82]

The leaf composition, going from outside to inside, is as follows:
-Type 302 stainless steel skin
-30 pound roofing felt
-Two 1″ layers of rigid insulation
-metal decking
-steel roof framing members
-3″ acoustical baffle
-3″ air space
-perforated steel ceiling panels with a white baked enamel finish.[83]

The roof skin consists of a batten type seams, except for the top portion of the roof (nearly flat), which is assembled with arc welded, lapped, and hooked seams. On flat parts of the roof, dummy batten caps carry the line of the seams to the top of the dome. Batten bars are extruded aluminum and are shaped to form a gutter within the capped seam. Any water working up under the seam is carried off down the center gutter of the extrusion. The roof contains about 373,000 pounds (or about 168,000 square feet) of stainless steel. The top and bottom thirds of the roof are

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[81] "Putting the Lid on Pittsburgh's Auditorium," *Engineering News-Record,* November 3, 1960.
[82] "Constructing a Unique Auditorium" (in Civic Arena clipping file of DRS Architects, Pittsburgh).
[83] "Putting the Lid on Pittsburgh's Auditorium," *Engineering News-Record,* November 3, 1960.

20-gauge stainless steel, and the middle third of the roof is 22-gauge stainless steel.[84] The largest sections of stainless steel roof sheathing measure 68" wide. Roof panel fabrication was done by the Limbach Co. of Pittsburgh.[85] Stainless steel was chosen over aluminum as a roof sheathing material because ease of maintenance and because of aluminum's expansion properties when heated.[86] A round exterior roof maintenance platform is located at the apex of the dome; it contains a water main riser for cleaning the roof. The center of the roof maintenance platform contains a rectangular, louvered vent housing to allow air to escape from the dome interior by convection.

Each moveable roof leaf contains five two-axle trucks plus two single-axle trucks at the outer edges of the leaf. The trucks contain trolley type steel carriage wheels, which rest on a single rail mounted to the concrete ring girder. Each half of the arena has three such steel rails, as the three nesting leaves rotate on different planes; in total there are 3000' of steel rails.[87] Each of the five double trucks per moveable leaf is chain driven by a pair of Westinghouse right angle gear motors with integral brake assemblies. An AC reactor control system keeps all six moveable leaves operating in step throughout the opening and closing cycles, with opposing leaves operated in pairs.[88] Roof leaves move at an average speed of 4' per second, or about 2.7 miles per hour. Roof motors are 25 horsepower (h.p.) on the top leaves, 20 h.p. on the middle leaves, and 10 h.p. on the bottom leaves.[89]

Roof control panels are present in the arena control booth at the top of the D Level of the seating bowl and in a first floor mechanical room located just south of the

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[84] Ibid.

[85] 1959 Metal Roofing Catalog: Batten-seam Roof, Limbach Co., Pittsburgh (A.I.A. File No. 12-C).

[86] Pittsburgh Tribune-Review, *Inside the Igloo*, 7.

[87] *Fortune*, February 1961.

[88] "It Moves…Powered and Controlled by Westinghouse" (in Civic Arena clipping file of DRS Architects, Pittsburgh).

[89] Pittsburgh Tribune-Review, *Inside the Igloo*, 33.

cantilever roof girder. Roof operation can be controlled manually or it can be done at the push of a button in automatic mode. Under optimal conditions, the roof takes 2.5 minutes to open or close.

8. Parking

Parking for 1,700 cars was originally accommodated in three surface lots. Two smaller lots flank the northwest and southwest sides of the arena. A larger lot is located east of the arena, just across Mario Lemieux Place. Additional land further east was originally reserved for a cultural center containing a symphony and opera halls, a theater, art museum, and structured parking. These additional buildings were not constructed and the 9.17 acre "Melody Tent" upper lot, owned by the Urban Redevelopment Authority of Pittsburgh and Allegheny County, was used as an additional surface parking lot for the arena and daily commuters. An additional small triangular lot, known as the West Lot, is located south of Washington Place. This lot was originally a landscaped park; its date of conversion is not known.

C. Description of Interior:

1. Floor plans[90]:

In addition to the concrete spectator stands, the Civic Arena contains three working floors. The first floor of the arena contains a double-loaded, U-shaped corridor that borders the north, west, and south sides of the arena floor. The arena floor itself measures 246′ x 132′. Proceeding in a clockwise manner from the center of the rear (east) side of the building, the inner ring of rooms contains home team locker rooms, lounges, and conference rooms; the West Lounge and restaurant; and visitor locker rooms, lounges, and conference rooms. Proceeding in a similar manner, the outer ring of rooms contains storage

[90]Note: this section describes present floor plan configuration; see section I.A.5 for a description of the original floor plan configuration.

and shop rooms; restrooms; a chair storage area; kitchen; press lounge, former Spectator Management Group offices; storage bays; Zamboni bays; restrooms; and the main mechanical room.

The second floor is circular and fairly symmetrical in plan. Each quadrant contains restrooms, concessions, and a pedestrian ramp. The central part of the west side of the second floor contains the Igloo Club, which is a private bar and lounge for premium seat holders. An East Lounge is adjacent to the east side of the seating area. A box office is located in the outer part of the south side of the second floor, next to Gate 1.

The third floor is also circular in plan, but its north and south side contain only passageways to access C Level seating and stairs to access E- and F-level balconies). The east and west sides of the third floor contain restrooms and concession stands, as well as stairs and elevators to access the super boxes.

2. Stairways and ramps:

Stairways are constructed of concrete and black steel pipe railings and typical glazed tile walls. Escalators are metal with adjacent walls areas also have a typical glazed tile finish. The four interior pedestrian ramps are constructed of poured concrete and feature natural finish concrete floors and painted concrete walls and parapets. Inner parapets are topped with single-rail steel pipe railings painted black, and outer parapets are topped with double-rail pipe railings.

3. Flooring:

The majority of all flooring on all three arena levels is natural finished poured concrete. Alternate floor finishes are used in limited areas, such as carpeting in offices and lounges, rubber in locker rooms, and tile in the kitchen.

4. Wall and ceiling finish:

In public areas where a finished look was desired, National Tile Company 6T series cream speckled "Vitritile" structural clay facing tile, laid in a stack bond pattern, was used for wall construction. This glazed tile is present in partition walls and staircases in most areas of the first and second floor levels. Only the most utilitarian mechanical, storage, or service areas on the first floor have concrete block partition walls as part of the building's original construction. Several first floor rooms that were later subdivisions also have concrete block walls.

Ceilings were generally left unfinished, with exposed structural concrete and mechanical systems. Exceptions are the restrooms and vestibules, which have finished plaster ceilings, and renovated office, meeting, and lounge areas, which have suspended acoustic tile ceilings.

5. Openings:

a. Doorways and doors:

Typical original interior doors are hollow metal flush type with metal frames. In renovated sections, such as the offices, flush panel wood doors have been installed. Inner vestibule doors are single-light, glazed aluminum frame type, similar to the adjacent exterior doors.

b. Windows:

The arena does not contain any interior windows. The appearance of window walls at Level 2 is described in detail in the exterior wall section II.B.3.

6. Decorative features and trim:

The original interior finishes were austere and featured exposed concrete ceilings, natural concrete floors, and

glazed tile partition walls. One of the few decorative features in the original concourse design were woven metal crowd control barriers flanking turnstiles at entrances without vestibules. None of these crowd control barriers are extant.

7. Stands and seating:

Original stand configuration consisted of reinforced concrete stands at Levels A, B, C, and D, which form contiguous rings around the oval arena floor. The non-contiguous E Level balcony and the super boxes (1975) and F Level balcony (1993) are later additions. Original seating consisted of 9,280 permanent scarlet and tangerine colored upholstered "theater type" seats. A Level Club seats were replaced ca. 1990 with blue seats. Original capacity was 10,500 for hockey and 13,500 for boxing; seat additions have raised the present capacity to over 17,000.[91, 92]

The seats between sections B23 and B25 are installed in what was originally a hinged section of 2,100 seats that could be raised 35' on hydraulic lifts to reveal a 119' x 64' stage for theater performances. The moveable seat section was fixed in place when the West Igloo Club was installed below it ca. 1990. The moveable seat section was operated by high pressure pumping units that caused four 42'-long and 12-5/8" diameter hydraulic plungers to raise and lower it. Two additional cylinders (one per side) served as locking posts to secure the seating section in an upright position. The total weight lifted was 445,000 pounds.[93] When the hydraulic stage was in use, there were about 7,200 useable seats. A disadvantage of the original theater configuration is that no sets could be flown, so they had to be brought in from the wings.[94]

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[91] Civic Arena clipping file, DRS Architects, Pittsburgh.
[92] Mellon Arena "Design Facts" sheet, prepared by Spectator Management Group, n.d.
[93] Civic Arena clipping file, DRS Architects, Pittsburgh.
[94] Lenny Litman, "Pittsburgh Previews Its Civic Arena: $22,000,000 Structure Bows in June," *Variety*, October 19, 1960.

The seat sections above the main arena floor entrances at Gates 2 and 5 can also be raised several feet by hydraulic lifts in order to permit the passage of tall vehicles.

8. Mechanical Equipment:

a. Heating, ventilation, and air conditioning (HVAC):

As originally configured, the area's HVAC system distributed up to 386,000 cubic feet per minute of tempered air. Louvered fresh air intakes are located on the north and south sides of the building on the outer sides of the pedestrian ramps that flank the promenade deck. Incoming air is filtered and tempered to 55 degrees Fahrenheit. Original chiller configuration consisted of 800-ton and 200-ton centrifugal units and two 78-ton reciprocating units that could be operated together or singly to meet the individual load demands of the main auditorium, exhibition area, meeting rooms, and offices.[95]

The main arena system, which serves 30,000 square feet of floor space, pulls air vertically from the fresh air tunnels below the first floor to one of eight air conditioning equipment rooms, where fresh air is blended with return air, chilled or heated, and brought to the desired humidity level. Tempered air is then drawn through electrostatic filters and ducted to twenty-four pylons, or "Aircoustats," spaced around the periphery of the arena. The Aircoustats contained sound attenuators and discharged a total of 280,000 cubic feet of air per minute to the arena floor. With the addition of the E and F Level balconies and superboxes, the Aircoustat units were removed, and additional ductwork was installed to supply air behind new seating sections. The perimeter of the second floor curtain wall area also

[95] "The Big Umbrella: Pittsburgh's Public Auditorium," Limbach Co. Construction Report No. 61-3, Contractors—mechanical and curtain wall (in Civic Arena clipping file of DRS Architects, Pittsburgh).

contains fan coil units.[96] HVAC systems are centrally controlled by a Honeywell Supervisory Data Center.

b. Lighting:

Original arena roof lighting consisted of a combination of four-lamp and six-lamp fixtures (1,000 watts per lamp) set in recessed areas of the roof panels.[97] These fixtures have since been replaced with single-lamp fixtures. These light fixtures are suspended by a cable system that allows them to be lowered for servicing from a central point at the base of each roof leaf.

Original lighting in the main second floor concourse areas consisted of two rows of 8′ fluorescent lamps suspended from the concrete ceiling. Fixtures in parallel rows were staggered in an offset pattern. These fixtures have been replaced with single lamp pendent fixtures with bell shaped reflectors. Spotlights were also originally mounted around the perimeter of the interior sections of the ring girder.

Offices, locker rooms, kitchen, and small meeting rooms generally have non-original fluorescent fixtures set into suspended acoustical ceilings grids. Lounge area have can-style spot lights installed in suspended acoustic ceiling tiles. First floor utilitarian spaces have suspended, 8′ dual lamp fluorescent light fixtures, 4′ fluorescent fixtures, or large single lamp fixtures with bell shaped reflectors.

c. Plumbing:

Water and sewerage mains are located in the fresh air tunnels below the first floor level. Original vitreous china toilet fixtures were supplied locally by the Eljer Co. of Ford City, Pennsylvania. The present sinks and vanities were installed ca. 1990.

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[96] Ibid.
[97] See architectural drawings E-14 and E-15.

d. Skating Rink:

The arena floor measures 132′ x 246′ and the ice rink measures 204′ x 94′. A quick freezing rink was installed in order to allow the ice to be prepared for events in as little as twelve hours year round. Thirteen miles of black steel refrigeration pipes were laid across the short length of the rink floor. Original refrigeration equipment included three compressors for cold brine, each 125 h.p. multi-cylinder reciprocating types with a 67-ton capacity at a 10 degree F. evaporating temperature and a 100 degree F. condensing temperature. Rink refrigeration equipment is centrally controlled by a Honeywell Supervisory Data Center.[98]

The rink floor itself was noted for its innovative slip joint design, which utilized a free floating slab to compensate for up to 3/8″ lateral movement in the concrete surface slab. The rink floor system is about 2′ thick; its composition, from base to surface, is as follows:

- 6″ slag
- 8″ concrete base
- 2″ Pittsburgh Corning Co. foam glass insulation, with coal tar pitch sealing joints above and below
- three layers of polyethylene vapor barrier, Koppers Co. Durethene film, with talcum powder between layers for expansion and contraction
- welded wire “chairs” (standard Canadian ice rink stands)
- 1-5/8″ outer diameter steel refrigeration pipe, set 1-1/4″ below concrete surface of 6″ concrete slab
- 1-1/4″ gray terrazzo[99]

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[98] “The Big Umbrella,” Limbach Co.
[99] “Ice Rink Slab Moves on New ‘Slip Joint’” (in Civic Arena clipping file, DRS Architects, Pittsburgh).

D. Site:

1. Historic landscape design:

Original Civic Arena landscaping was designed by the noted Pittsburgh landscape architecture firm, Simonds and Simonds, which had collaborated with Mitchell & Ritchey several years earlier in the widely acclaimed design of Pittsburgh's Mellon Square. The trapezoidal, sloped area leading to the main entrance plaza is a continuation of the radiating design of the promenade deck, which in turn echoes the radiating segments of the arena's domed roof. The entry plaza was originally designed with a linear corridor punctuated at center by rectangular and trapezoidal planter boxes and water features. The upper (west) water feature was the largest, was rectangular in shape, and contained a single pool. The lower water feature consisted of two pools; its upper pool had two jets and a central spillway that directed water to an adjacent lower pool. A large trapezoidal planter with randomly-placed azaleas occupied the space between the two water features. The planting scheme was generally symmetrical except for the presence of a line of five little-leaf lindens on the north side of the plaza and the presence of three flagpoles on the south side of the plaza. Circular areas at the base of trees and the tops of some planter walls were constructed of recycled limestone or Ligonier block street pavers, which is the same type of stone that was used in the decorative aggregate finish applied to the arena's podium.[100]

Simonds and Simonds' planting scheme echoes the space-age feeling of the arena, especially in the randomly grouped Chinese junipers in the triangular planted areas that flanked the north and south sides of the main walkway; when viewed from overhead, the juniper layout resembled that of a constellation. Also markedly mid-century modern in feeling is the zig-zag planting scheme of the two rows of

[100] See architectural drawings L-13 and L-14.

dwarf winged euonymus in the curved area between the promenade deck ramp and the north and south parking lots.

The most recent major redesign of arena's landscaping scheme was ca. 1990. The general layout of the Simonds and Simonds plan has been maintained, but the water features and associated planters and have been removed. The removal of the upper water feature has allowed for the construction of a U-shaped circulation path, and the removal of the lower two water features had allowed for the installation of a main arena sign composed of three concrete columns surmounted by a metal semi-spherical cap reminiscent of the area dome. Original light standards were replaced, and new planters were constructed in the triangular areas flanking the main walkway.

2. Outbuildings:

An air conditioning cooling tower and an adjacent boiler room are located on the east side of Mario Lemieux place, east of the main arena building. A tunnel connects the cooling tower areas to the first floor of the arena.

PART III. SOURCES OF INFORMATION

A. Architectural drawings:

The following list is that of Mitchell & Ritchey's original drawings, dated November 1, 1957. At the time this recordation was prepared, DRS Architects, Pittsburgh, was in possession of many of the original line drawings in the following list. DRS Architects plans to donate the original line drawings of the Civic Arena to the Dahlen K. Ritchey Collection housed at Carnegie Mellon University's Hunt Library Architectural Archives in the summer of 2011.

BOOK - 1 SITE DEVELOPMENT

L-1 Site Plan
L-2 Site Grading Sections
L-3 Site Grading Sections
L-4 Site Block Plan A
L-5 Site Block Plan B
L-6 Site Sections (Developed)
L-7 Site Details
L-8 Site Details
L-9 Site Details
L-10 Street and Drive Profiles
L-11 Site Utilities Plan
L-12 Site Sewer Profiles
L-13 Planting Plan Block A
L-14 Planting Plan Block B
L-15 Venting System

BOOK -2 STRUCTURAL (NOT INCLUDING ROOF)

S-1a Foundation Plan
S-1b Column Schedule
S-1c Column Schedule and Details
S-1d Details
S-2a Framing Plan Details Level 2 Center line to 9
S-2b Framing Plan Details Level 2 9 to 16
S-2c Framing Plan Details Level 2 16 to center line
S-3a Framing Plan Details Level 3 center line to 9
S-3b Framing Plan Details Level 3 9 to 16
S-3c Framing Plan Details Level 3 16 to center line

S-4a Framing Plan Details above Level 3 center line to 7
S-4b Framing Plan Details above Level 3 17 to center line
S-4c Framing Plan Details above Level 3 Light Platforms
S-5a Vomitory Details
S-5b Steel Lift Seat Section over Stage Details
S-5c Steel Lift Seat Sections at ends Details
S-5d Beam, Joist and Tube Slab-Diagram and Details
S-6a Foundation Plan Level 1 slab on grade
S-6b Boring log, typical details and columns details
S-6c Cantilever frame anchorage and cooling tower
S-6d Girder abutment and mechanical room details
S-7a Main walls - elevations & details
S-7b "A" frames - schedule and details
S-7c Ring girder - plan and section
S-7d Wall sections & details
S-7e Level 2 plans
S-7f Level 2 details

BOOK -3 ARCHITECTURAL

A-1 Plan Basement
A-2 Plan Level 1
A-3 Plan Level 2
A-4 Plan Level 3
A-5 Plan Total Seating
A-6 Interior Sections
A-7 Elevations
A-8 Elevations
A-9 Finish Schedule
A-10 Door Schedule
A-11 Plan Level 1 Quadrants 1 and 4
A-12 Plan Level 1 Quadrant 2
A-13 Plan Level 1 Quadrant 3
A-14 Plan Level 2 Quadrant 1
A-15 Plan Level 2 Quadrant 2
A-16 Plan Level 3 Quadrant 1
A-17 Plan Level 3 Quadrant 2
A-18 Plan Total Seating Quadrant 1
A-19 Plan Total Seating Quadrant 2
A-20 Sections
A-21 Sections
A-22 Details - Exterior - Entrances - All levels
A-23 Details - Ticket Booths, Turnstiles, etc.

A-24 Details - Moving Stairs, Lifts, etc.
A-25 Vomitories
A-26 Details - Broadcast and Control Rooms, etc.
A-27 Details - Toilets, Lockers, Mechanical Rooms, Dressing Rooms
A-28 Details - Folding and Roll Doors
A-29 Details - Handrails, etc.
A-30 Exterior Wall Sections
A-31 Details - Stage and Lift Seat Sections
A-32 Rink Details
A-33 Seating Details
A-34 Concessions - Details

BOOK - 4 PLUMBING

SP-1 Foundations and Tunnel Plans
P-2 Plumbing Level 1
P-3 Plumbing Level 2
P-4 Plumbing Level 3
P-5 Details (Toilet Rooms)
P-6 Details and Riser Diagrams
P-7 Details and Riser Diagrams
SP-1 Foundations
S-2 Sprinklers Level 1
S-3 Sprinklers Level 2
S-4 Sprinklers Level 3

BOOK - 5 HEATING, VENTILATING, AIR-CONDITIONING, & ICE SKATING RINK
H-I Heating, Ventilating and Air Conditioning Plot Plan
H-2 Foundations and Tunnel Plan
H-3 Level 1 Heating, Ventilating and Air Conditioning Plan
H-4 Level 2 Heating, Ventilating and Air Conditioning Plan
H-5 Level 3 Heating, Ventilating and Air Conditioning Plan
H-6 Seating Plan Heating, Ventilating and Air Conditioning Diffuser H-7 Details Heating, Ventilating and Air Conditioning Plan
H-8 Details Heating, Ventilating and Air Conditioning Plan
H-9 Details Heating, Ventilating and Air Conditioning Plan

H-10 Details Heating, Ventilating and Air Conditioning Plan
H-11 Details Heating, Ventilating and Air Conditioning Plan
H-12 Details Heating, Ventilating and Air Conditioning Plan
H-13 Level 1 Piping
H-14 Details Mechanical Room 1401
H-15 Wiring Diagrams Heating, Ventilating and Air Conditioning Plan
R-1 Ice Skating Rink
R-2 Ice Skating Rink
X-1 Details for Venting System

BOOK - 6 ELECTRICAL
ES Electrical Site Plan
ES-1 Site and Exterior Work
E-1 Foundation and Tunnel Plan
E-2 Plan Level 1
E-3 Plan Level 2
E-4 Plan Level 3
E-5 Plan Level 1 Quadrant 1 and 4
E-6 Plan Level 1 Quadrant 2
E-7 Plan Level 1 Quadrant 3
E-8 Plan Level 2 Quadrant 1 and 4
E-9 Plan Level 2 Quadrant 2 and 3
E-10 Plan Level 3 Quadrant 1 and 4
E-11 Plan Level 3 Quadrant 2 and 3
E-12 Plan Total Seating Quadrant 1 and 4
E-13 Plan Total Seating Quadrant 2 and 3
E-14 Plan Roof Lighting
E-15 Roof Lighting Details
E-16 Roof Maintenance Platform
E-17 Boxing, Speaker and Scoreboard Details
E-18 Cantilever Frame Details
E-19 Cantilever Frame Details
E-20 Roof Platform Schedules
E-21 Single Line Diagrams
E-22 Panelboard and Feeder Schedules
E-23 Sound System Details

E-24 Details
E-25 Details
E-26 Details of Outside Lighting

BOOK - 7 MAIN ROOF (MOVABLE & FIXED)
MR-1a Cantilever Frame plan and elevation
MR-1b Cantilever Frame girder details
MR-1c Cantilever Frame girder details
MR-1d Cantilever Frame girder details
MR-1e Cantilever frame, details of struts and bracing
MR-1f Cantilever frame, sub connection details
MR-1g Cantilever frame, access ways and miscellaneous details
MR-1h Cantilever frame winch platform
MR-1i Cantilever frame stress sheet and miscellaneous details
MR-2a Leaf framing plans, coordinates and elevation
MR-2b Typical framing details of leaves
MR-2c Framing detail of leaves pivot to panel point 6
MR-2d Framing details of leaves panel points 15 and 16
MR-2e Framing details - fixed leaf
MR-3a Pivot and truck assembly
MR-3b Pivot and movable leaf closures plans and elevations
MR-3c Pivot and movable leaf closures details
MR-3d Bottom closure details miscellaneous details
MR-3e Roofing and Ceiling Details
MR-4a Reflected Ceiling - Plan and Details
MRM-1 Movable roof drive wheel assembly at outer ribs (ref. drawings)
MRM-2 Movable roof operation wiring single line diagram (ref. drawings)

B. Early Views:

The prime sources for early views of the Civic Arena are the collections of the following Pittsburgh area repositories:

Historical Society of Western Pennsylvania, Allegheny Conference on Community Development Collection; Civic Arena Collection; and Civic Light Opera Collection.

Carnegie Mellon University Hunt Library Architectural Archives, Dahlen K. Ritchey Collection.

DRS Architects archives (successor to Mitchell & Ritchey)

University of Pittsburgh, Archives of Industrial Society

There is much overlap between these collections, particularly in the construction photos. It was typical for companies like U.S. Steel to use their public relations departments to photograph the arena construction; copies of such photos were released to the architect and local agencies like the Allegheny Conference on Community Development. Thus, one often finds copies of the same photo in multiple archival collections.

C. Interviews:

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D. Selected Sources:

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E. Likely Sources Not Yet Investigated:

It is probable that the corporate archives of suppliers and contractors involved in area construction contain written and

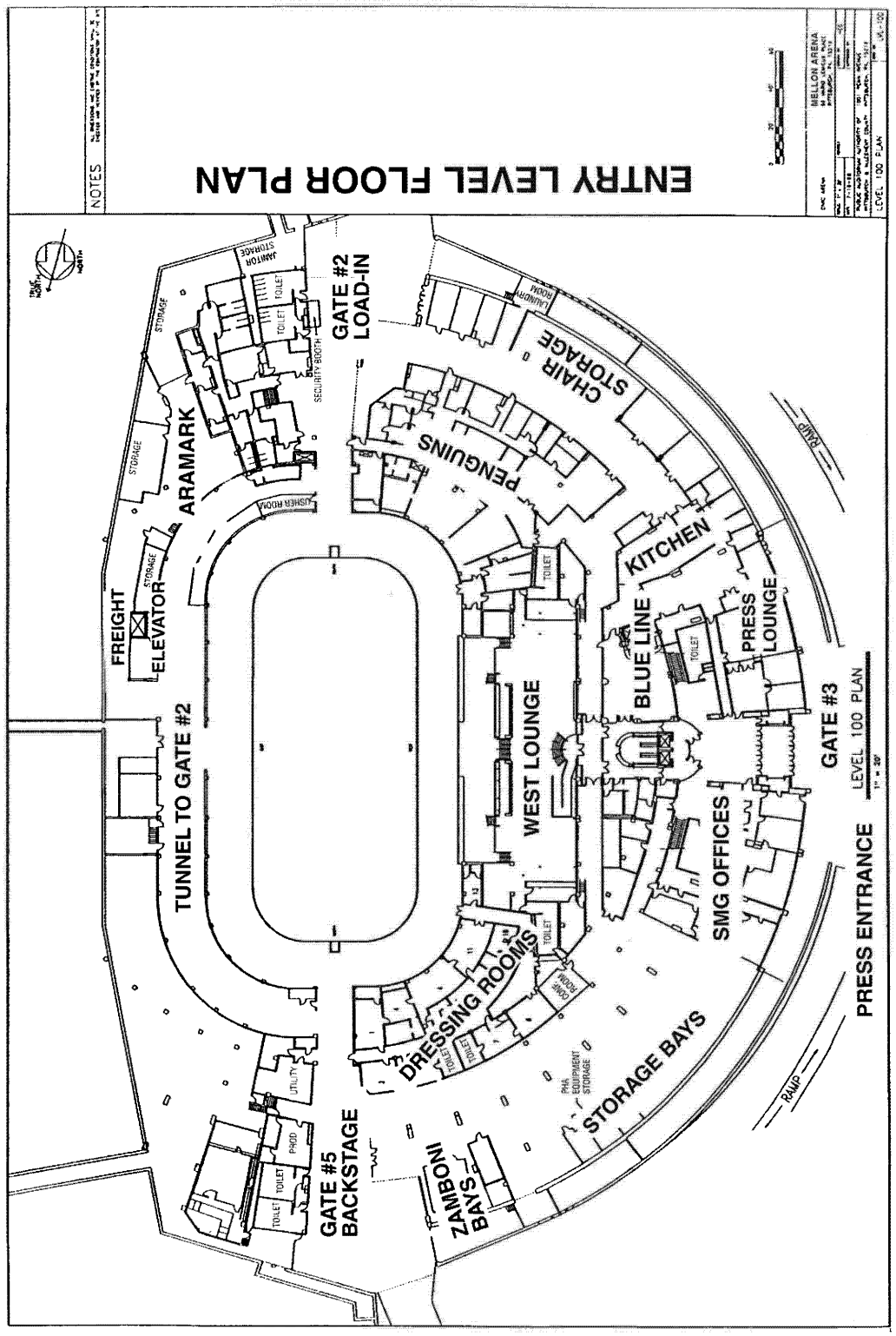
photographic documentation. Likely sources are: Dick Corp., Westinghouse, U.S. Steel Corp., Koppers, and Alcoa.

F. Supplemental Material:

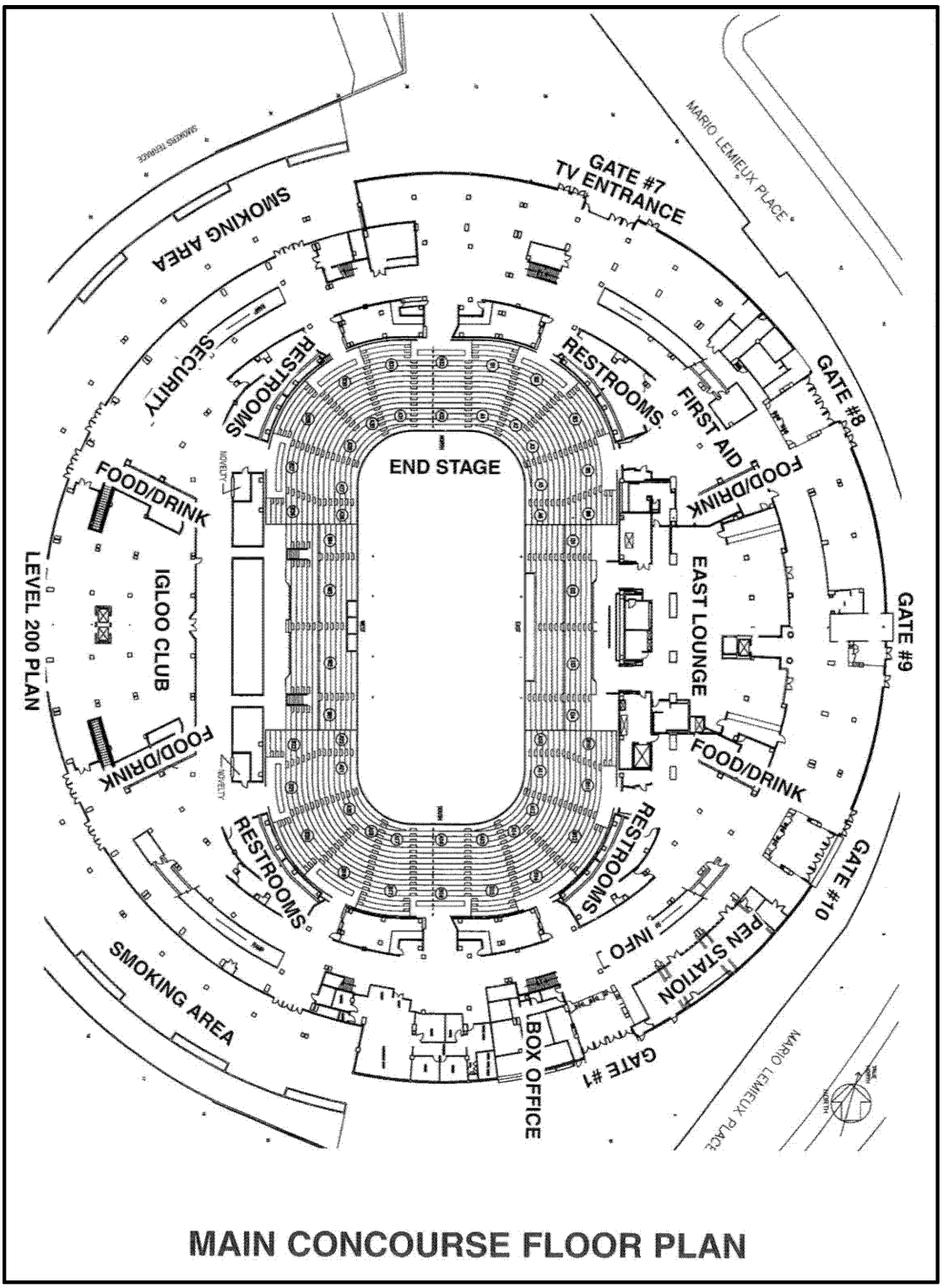
The following list is a compilation of video footage that shows views of the Arena Dome, some of which show the moveable roof in action:

Pre-Civic Arena Regional and Neighborhood Contextual Documentation						
Disc No.	**Title**	**Description**	**Duration**	**Roof Footage**	**Time Stamp**	**Duration**
I.	Rebirth of a Region	1960's WQED film of director of Allegheny Conference discussing achievements of Renaissance I.	24:19	N/A	N/A	N/A
II.	Wylie Avenue Days	2007 WQED documentary on the Hill District in the 1930s to 1950s	58:29	N/A	N/A	N/A
Civic Arena Documentation						
Disc No.	**Title**	**Description**	**Duration**	**Roof Footage**	**Time Stamp**	**Duration**
III.	Civic Arena Opening Day	Amateur footage of opening day celebration	04:10	Roof opens entirely, shot from interior	02:58-03:18	00:20
IV.	Spotlight: The Igloo	FSN Pittsburgh documentary on Civic Arena and events	26:47	Roof opens partially, from interior and exterior	03:31-03:36 22.30-22:39	00:05 00:09
V.	35 Years of Excellence	SMG documentary on Civic Arena and events	08:40	Roof opens approx. ¼ , from interior	02:24-02:29	00:05
V.	Roof Closing	Recent amateur footage showing roof closing	01:02	Roof closes partially, from exterior	08:45-09:47	01:02
Civic Arena in Cinema						
Disc No.	**Title**	**Description**	**Duration**	**Roof Footage**	**Time Stamp**	**Duration**
VI.	The Fish That Saved Pittsburgh	1979, Warner Brothers	1:43:31	Roof opens entirely but only partially visible, shot from interior	1:16:14-1:16:52	00:38
VII.	Sudden Death	1999, Universal Pictures, good coverage of building interior and exterior	1:50:01	Roof opens partially, shot from exterior (aerial)	1:33:28-1:34:00	00:32

SITE PLAN LEVEL ONE



SITE PLAN LEVEL TWO



SITE PLAN LEVEL THREE